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ABSTRACT

The development of sectoral training systems in two economic sectors--the printing industry and the sector of health care in hospitals--was examined in a study that entailed parallel research projects in five European countries: Belgium, Latvia, The Netherlands, Norway, and the United Kingdom. The study was based on the assumption that the development of sectoral training systems entails four processes: articulation of sectoral (training) agencies and bodies; negotiation of training agreements; creation of training policies and provisions; and implementation of training policies and programs at the firm level. Sectoral training systems were generally more clearly developed in the printing sector. Printing sector training systems were highly developed in Norway, Belgium, and the Netherlands. In the United Kingdom, the established social partner-led training system that was broken down by the liberal government in the 1980s has recently been reconstructed through the conclusion of joint training agreements and the establishment of a joint training council. In all five countries, sectoral-level training was less articulated in the hospital sector. The research model was deemed a workable device for description and analysis of developments in the two sectors studied. (Contains 15 references) (MN)

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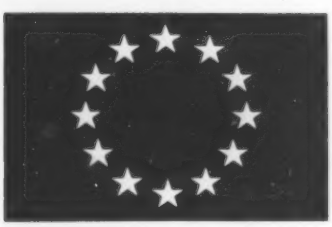
PANORAMA

A sectoral approach to training in the printing industry and the hospital sector

European Centre for the Development of Vocational Training

Synthesis report of a study in five European countries



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A sectoral approach to training in the printing industry and the hospital sector

Synthesis report of a study in five European countries

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Foreword

This report is the third* publication to emerge from CEDEFOP's pilot project on the advantages of and limitations to the sectoral approach to training policy and its implementation.

The report constitutes first and foremost an analysis - based on a previously developed conceptual model - of the sectoral training systems, of their complexity and of the way in which they interact with their environment.

The scope of the report comprises two different - but in many respects complementary - sectors in four EU Member States and Latvia.

The analysis is based on four parameters: the interactions between the training agencies and bodies; the negotiation of training agreements; the framing of training policies and courses; and the implementation of training policies and programmes at the level of companies.

On the whole, the model proved to be an effective tool for analysing and interpreting developments in the two sectors. It was especially useful for describing the complexity and diversity of the sectors and their practices. Nevertheless, the model undoubtedly had certain limitations, which are discussed in the final chapter.

CEDEFOP wishes to thank Mr John Warmerdam for acting as scientific coordinator and for his involvement throughout the pilot project. He was assisted in drawing up this synthesis report by the authors of the national reports, who are all listed in the introductory chapter and to whom we also express our warmest thanks.

Tina Betzeletou
Project Coordinator

Stavros Stavrou
Deputy Director

* The first study was 'A sectoral approach to training' - a synthesis report on trends and issues in five European countries, CEDEFOP, 1997. The second was 'Sectoral training systems in a knowledge economy'. CEDEFOP, 1997.

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1. Introduction

In this report we present the results of a CEDEFOP study into the development of sectoral training systems in two economic sectors: the printing industry and the sector of health care in hospitals. For this study, parallel research projects have been set up in five European countries: Belgium, Latvia, The Netherlands, Norway and the United Kingdom. The participating institutes were:

- in Norway: the Faculty of Social Sciences of the University of Tromso (Ms Tone Skinningsrud and Mr. Einar Fagertun).
- in Belgium: the Higher Institute of Labour Studies in Leuven (Mr Jan Denijs and Mr Peter Simoens)
- in the United Kingdom: the Matthew Boulton College in Birmingham (Mr Barry Coleman)
- in Latvia: the Centre of Professional Education in Riga (Mr Uldis Grunte)
- in The Netherlands: the Institute for Applied Social Sciences in Nijmegen (Mr John Warmerdam and Mr Harry van den Tillaart)

The project as a whole was coordinated by CEDEFOP in Thessaloniki (Ms Tina Bertzeletou). It is one of the projects carried out within the framework of the CIRETOQ network (Circle for Research on Trends in Occupations and Qualifications). The Latvian study was supported by the European Training Foundation in Turin. A representative of the ETF (Mrs. Anastasia Fetzou) participated in the project meetings. The meetings were also attended by a representative of DG XXII of the European Commission (Mrs Isabelle Combes).

This synthesis report presents the main results and conclusions of the studies in the five countries involved. First, we sketch the major objectives and the design of the project, thereby referring to the research model which forms the basis of the analyses. Secondly, with the help of this model, we give a comparative overview of the training systems in the two sectors in the five countries and we discuss their main differences and trends. In the third place, a number of issues is discussed which have to do with the positioning of sectoral training systems in relation to the education and the employment system and the larger context of society. This exercise is a prelude to the final chapter, where conclusions are drawn regarding the usefulness of the applied research model.

2. Objectives and design of the project

In 1996 CEDEFOP started a research project with the objective of assessing the opportunities and limitations of a sectoral approach to training needs analysis and training policy development. Within the framework of this project a *conceptual model* for the systematic description and analysis of sectoral training systems has been developed. That model is presented in figure 1 (see also Warmerdam & Van den Tillaart, 1996).

In this model the coming into existence of sectoral institutions as a separate level for the organization of training is conceptualized as a process of dynamic system development, unfolding over time through joint actions of sectoral agencies, taking place within a specific social and economical environment. The model identifies the basic elements and processes of the development of sectoral training systems and puts them into a general frame of reference that can be used as a methodolodological device to study a variety of specific sectoral and national situations.

In order to test the model, a follow-up study has been set up, within which the model was used to analyse sectoral training systems in two concrete economic sectors. The *major objectives* of this study were to apply the model in describing the sectoral training systems in these two sectors, with reference to the basic elements of the model; to test the model in these specific sectors and assess its value as a methodological device; and, if possible, to elaborate and refine the model using the experiences gained by studying the developments in two concrete sectors.

For the study a profit sector, i.e. the printing industry, and a non-profit sector, i.e. the sector of health care in hospitals were chosen. These sectors were selected for a variety of reasons. The printing sector was chosen because:

- there are many small and medium sized companies operating in this field;
- it has to cope with rapid technological and commercial developments;
- there is high pressure on the qualification and (re-)training of employees;
- in several countries it was among the first which developed sectoral training policies;
- research and documentation is available which can be used for secondary analysis;
- currently, several processes of sectoral and occupational restructuring are taking place, which are relevant as regards their effects on the sectoral training system.

The hospital sector was selected because:

- it is a good example of a large non-profit service sector;
- a lot of technological and organizational developments take place;
- training is traditionally very important in this sector;
- in several countries sectoral training policies are now being established or transformed;

- the sector deploys a range of 'occupational levels' (doctors, nurses, caretakers, assistants) and this structure is rather homogenous throughout different countries;
- an interesting point in this sector is that it is possible to look not only at the role of sectoral agencies but also at the role of professional associations (of doctors, of nurses) when it comes to the provision of training.

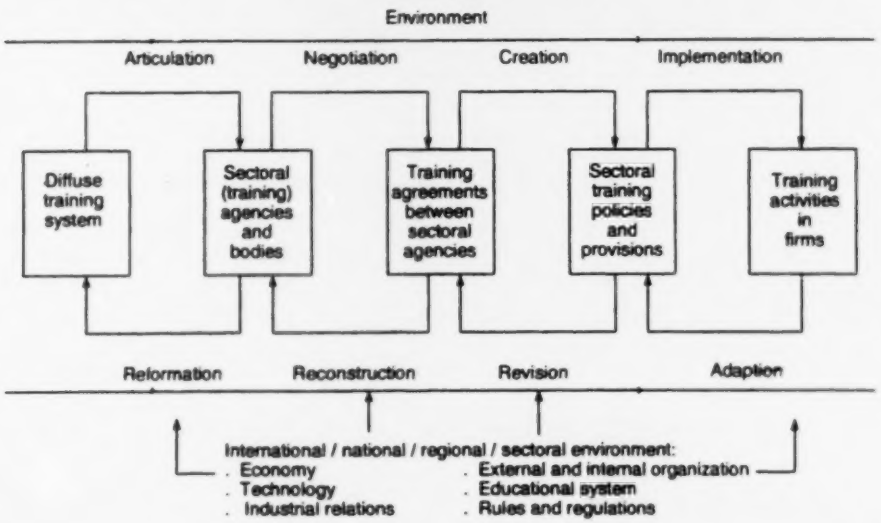
In each of the participating countries - with exception of the UK, where only the printing industry was investigated - both the printing sector and the hospital sector were studied, applying the same methodology and frame of reference. The *guiding questions* for the sector studies were:

- How far have sectoral training systems actually developed in the sector? What is the relationship with initial vocational education?
- Who are the main agencies in the sectoral training systems? How have they been constituted? What agreements have been made between them?
- Which training provisions and policies do exist? How were they developed? How are they implemented c.q. adapted to new situations?
- What can be said about the results of the sectoral agreements and policies on firm level?
- What are the main environmental factors that influence the development of the sectoral training system?

Primarily, the studies have been based on secondary analysis of existing sources, for instance sectoral research reports, sectoral policy documents, annual figures of sectoral agencies, literature, articles in sectoral magazines, existing statistical data on the sector, etc. Besides, some interviews were held with experts in the field, like policy-makers of training agencies, representatives of social partners and representatives of training institutes or specific companies in the sector.

The information was laid down in national reports on the printing industry and the hospital sector. These reports form the bases of the synthesis report.

Figure 1 - Model of the unfolding of sectoral training systems



3. Overview of the training systems in the printing industry

The following pages give a comprehensive overview of the training system in the printing sector in the different countries. This overview is structured according to the research model (see chapter 2) and based upon the information in the five national reports. The overview covers the following aspects:

- the articulation of the sectoral level;
- training agencies and bodies;
- agreements between sectoral agencies;
- sectoral training policies and provisions;
- assessment of results at the institute/firm level;
- main trends in environmental factors influencing the training systems.

The information is presented in the form of qualitative overviews. The overviews contain in keywords the main data about the topics mentioned above. With the help of these schemes we can obtain a more systematic picture of the main differences between the sectoral training systems in the five countries involved. These will be discussed in chapter 5.

3.1 Articulation of the sectoral level

United Kingdom

- no legal regulations concerning continuing training for employees
- eighties: 'bureaucratic' system of statutory training levies dismantled by liberal government and replaced by system of voluntary (employers) associations
- eighties: establishment of employer-led sectoral Industry Training Organizations (voluntary associations) employer-led regional Training and Enterprise Councils (legal institutes)
- nineties: continuing training under regulations concerning structure for 'national vocational qualifications'; government has recently set 'targets for lifetime learning'
- nineties: recruitment, training, development and apprenticeship agreement between social partners in printing and publishing industry.

Norway

- no legal regulations concerning continuing training for employees;
- since 1994 in national 'Main Agreement' between social partners special chapter included about continuing training i.e. 'competence development'; binding for every separate sectoral 'Special Agreement';
- Moreover, training paragraphs included in 'Special Agreements' between social partners for different branches of printing industry.

Belgium

- since 1981 legal regulation concerning financing and funding of continuing training;
- since 1988 training paragraph part of 'Interprofessional Agreements' between social partners; defines objectives and sets limits for sectoral negotiations;
- in addition, training paragraphs included in Collective Labour Agreements for different branches of the printing industry.

The Netherlands

- no legal regulations concerning continuing training for employees; considered as a responsibility of the social partners;
- since 1982 training part of Central Agreement between social partners, with status of 'recommendations' for negotiations in sectors; basis for many sectoral training initiatives;
- besides, training paragraphs included in Collective Labour Agreements for different branches of the printing industry.

Latvia

- vocational education run by the State Ministry of Education and Science;
- no legal regulations concerning continuing training for employees;
- no training agreements between social partners on national and sectoral level;
- growing role/responsibility of printing companies in continuing training.

3.2 Training agencies and bodies

United Kingdom

- government, i.e. Department of Education and Employment, stimulated development of NVQ structure and set 'targets for lifetime learning';'
- since 1982: replacement of statutory Industry Training Boards by voluntary, employer-led Industry Training Organizations (ITO); ITO function for the printing sector is undertaken within the employers' federation: the British Printing Industries Federation (BPIF);
- ITO recently has set up the Printing Occupations Lead Body to develop occupational standards (NVQs) for the the printing industry; regional colleges of Further Education (FE) offer course programmes;
- recently the Joint Training Council (JTC) has been set up by employers (BPIF) and the trade union of the printing and publishing sector, i.e. Graphical, Paper and Media Union (GPMU), with equal representation from each party;
- in 1988: establishment of employer-led regional Training and Enterprise councils (TEC); government gave local groups of employers leading role in government-funded training; at the moment serious gaps in TEC/ITO's interface.

Norway

- traditionally strong role of the Norwegian Graphical Union: offers course-supply itself as active strategy of retraining and continuing training for its members, besides making the training strategy part of the bargaining process with the employers;
- in 1972: establishment of the Graphical Training Fund, jointly administrated by NGU and 4 employers' associations of the printing and newspaper sector; both sides contribute through a levy system;
- in 1987: establishment of the technology-based Graphical Institute, now the leading centre for publishing and applied information technology; funded by training fund, social partners, several research councils and state regional development fund;
- in 1992: establishment of Regional Competence Centres in major cities; financed by the training fund, owned and run by the local graphical unions;
- regional labour market agencies provide funds to Regional Competence Centres in order to provide training for unemployed graphical workers, within framework of several specific Labour Market Programmes and schemes.

Belgium

- two trade unions - one Christian, the other socialist - and one employers' association involved in training in the printing industry;
- in 1990: establishment of two sectoral training funds in the graphic sector, one for the Flemish and one for the French community; both funds are financed by an employers levy on gross wages, with the percentage derived from biannual interprofessional agreements;
- special training fund, cross-sectorally organized, for administrative employees;
- training fund subsidizes courses and projects of a broad range of training providers: public providers, like Employment agencies, Institutes for Social Promotion and Institutes for Independent Entrepreneurship, and private providers, like deliverers of equipment;
- private training institutes play a limited role in the printing sector.

The Netherlands

- long tradition of 'central administration' of the sector by the social partners;
- highest body is the Central Bureau, a policy-making institute where the Employers' federation (KVGO) and the trade unions (Christian and Socialist) jointly develop sectoral policies in the field of among other things technology, employment, labour-market and training;
- since 1973, the main executing organization of the sectors training policy as defined by the Central Bureau is the Graphical Training Centre (GOC); the GOC unites two formerly separately operating organizations for apprenticeship programmes and further training respectively;
- besides, 5 regional schools for vocational education provide further training in printing occupations;

- since 1983 two sectoral training funds are active, both financed with a levy on wages and jointly administrated by the social partners: one equalization fund and one training fund;
- the funds almost exclusively support training courses by the GOC; apart from some deliverers of equipment, there are no specific private providers of training in printing;
- the Employment Exchange Service and its regional offices offers training for the unemployed and other special risk groups at the labour-market.

Latvia

- under the communist regime, vocational education and training were totally planned and financed by the State;generally, this is still the case; training curricula are affirmed by a supportive organization, the Professional Education Centre;
- printing and publishing companies themselves take care of further training of their employees; links between companies and schools almost non-existent;
- in 1991: establishment of trade unions on sectoral level; tendency to develop according to Western European models; thus far, no role in training;
- recently: establishment of 'brotherhoods of craftsmen' in Crafts work Chambers, in bookbinders and typesetting segments; may develop into organizations which link companies/employers, employees and schools in order to provide further training.

3.3 Agreements between sectoral agencies

United Kingdom

- recently: collaborative agreement concerning recruitment, training, development and apprenticeship between between social partners, covering GPMU printing production process workers; establishes among other things. the Joint Training Council and the modern apprenticeship approach;

recently: agreement between employers (BPIF) and government (DFEE) to elaborate specific sectoral training targets for the printing sector within the framework of the National Training and Education Targets.

Norway

- nineties: chapter on competence development in Main Agreement between social partners; includes among other things statements concerning company-directed nature of continuing training, joint responsibility of employers and employees, measures to achieve higher levels of training in companies (needs analysis, cost coverage);
- nineties: training paragraph in Special Agreement between union and the process industry; includes among other things recommendations concerning a joint sectoral training fund and joint training committees in companies;
- nineties: training paragraph in Special Agreement between union and the newspaper and printing industry; includes among other things. several measures to promote

continuing training: a standing Training Committee for the sector, paid training leave for workers, a levy arrangement for the Graphical Training Fund, recommendations of training committees on company level, recommendations concerning certification of continuing training.

Belgium

- eighties: bi-annual Interprofessional Agreement between social partners; defines target groups for training and levy arrangements for the sectoral training funds;
- evolution in target groups: in early years accent on youngsters and job seekers, i.e. the unemployed; recently, under pressure from the employers, more attention to employees;
- evolution in fund raising: gradual raising of levy percentage; recently: part of budget reallocated from active (training) to passive-labour market measures (pensions);
- based on IPA, bi-annual Collective Labour Agreement for the graphic sector; includes among other things. agreements concerning target groups and subsidy schemes of the Training Fund
- from the beginning graphic sector did not respect IPA target group definition, but expanded the definition of so-called 'risk groups' to all workers in the graphic sector.

The Netherlands

- long tradition of training regulations in Collective Labour Agreements between social partners; include agreements concerning sectoral innovation and employment policies, occupational structures and training requirements, target groups, training funds and subsidy schemes for training, the Graphical Training Institute (GOC)
- nineties: covenant between social partners, i.c. GOC and government concerning renewal of vocational education infrastructure and programmes in the printing industry; as a consequence separate covenant between GOC and graphical schools concerning division of tasks with regard to initial and adult education;
- nineties: covenant between GOC and National Employment Exchange Service to establish a framework for training of the unemployed; based on this, in several regions regional covenants with regional employment offices concerning regional labour-market, training and retraining programmes for specific target groups;
- recently: formal agreements between GOC and training institutes of adjacent branches (e.g. audiovisual sector, packaging industry) concerning the development of training programmes for borderline occupations and sector crossing technologies (multi media!).

Latvia

- apart from relationships between state department, PIC and vocational schools, no formal agreements between agencies operating in the printing sector;
- 'craftsmen brotherhoods' in the making; provide opportunities for mutual consultation of employers, employees and schools.

3.4 Sectoral training policies and provisions

United Kingdom

- General role of Joint Training Council:
  - reviews skill requirements of the industry;
  - produces material to support delivery of training;
  - stimulates companies to take training initiatives;
  - encourages a balanced entrance of different labour-market groups;
  - stimulates GPMU workers to acquire NVQ qualifications (assessment);
  - examines by survey current and future skill requirements;
  - sets national and regional training targets for printing branches.
- Stimulation of development of training programmes by JTC:
  - programme includes college courses, direct training and open learning packages.
- Stimulation of training plans in companies by JTC:
  - companies plan future skill requirement in coordination with staff;
  - plans specify further training and retraining of GPMU workers and new entrants;
  - plans determine number of workers to be (re)trained and recruited.
- Stimulation of implementation of training in companies by JTC:
  - JTC provides Personal Development Plans, signed by management, chapel and trainee;
  - training coordinators of JTC provide guidance and advise on PDPs
  - duty of GPMU members to cooperate in training initiatives;
  - appointment of GPMU members as 'workplace assessors';
  - workplace assessors jointly with management monitor progress of NVQ trainees;
  - trainee gets paid time off to attend PDP-related courses.

Norway

- Training policy of Norwegian Graphical Union:
  - basic strategy: acquiring jurisdiction over new technology and acquiring necessary skills to be able to operate with it;
  - active stimulation of training and continuing retraining of members;
  - exploitation of union-owned Regional Competence Centres for printers.
- Training policy of the employers' association (Strategy Plan):
  - basis: 'identity problem' of the branch; redefinition of the printing branch
  - goal: new foundation course in 'media and communication'.
- Policies/provisions of the Graphical Training Fund:
  - coordination of training network (GI plus RCCs);
  - steering group to coordinate training supply by network members;
  - reimbursement of training costs to enterprises and employees;
  - collaborative activities: research, development, information, promotion;
  - scholarships for vocational students and teachers;
  - strategic conferences for suppliers in training network.

- Policies/provisions of the Graphical Institute:
  - technology-based research and development projects (e.g. Media 2000)
  - (short) course offerings for both union members and other client groups;
  - exploitation of 'multimedia laboratory'.
- Policies/provisions of Regional Competence Centres:
  - firstly: modular course offerings for unemployed union members;
  - later: mix of unemployed and employed union members;
  - first: only for preprinting skilled workers; later: broadening of target groups.
- Labour-Market Programme, i.e. Substitution Scheme for the unemployed
  - funding of training leave and replacement of trainee by unemployed worker.

Belgium

- Policies/provisions of the sectoral training funds:
  - sponsoring of projects;
  - sponsoring of investment in new equipment by training suppliers;
  - sponsoring training centres for SMEs in several cities.
- Policies/provisions of Training centres for SMEs:
  - stimulation of graphical craftsmanship and entrepreneurship;
  - offers apprenticeships, training for entrepreneurs and training for specialization;
  - offers training for the unemployed, under the authority of the employment service;
  - promotional committee of entrepreneurs: discussion, evaluation, advice on programmes.

The Netherlands

- Main tasks of the GOC:
  - research into staff and training needs:
  - research into (implications of) of technological and market developments;
  - development/maintenance of national qualifications structure;
  - development/ maintenance of graphical vocational programmes;
  - provision of further training courses for employees;
  - monitoring and maintaining quality of training programmes;
  - coordinate labour-market and educational provisions in printing sector.
- Training for employees:
  - qualifying courses, i.e. out-of-school offer of longer courses for recognized certificates;
  - short courses, including introduction, specialization and 'innovation courses';
  - in-company project, i.e. courses tailored to companies or groups of workers
  - supply of distance-learning courses;
  - spear point: training for new technologies (multi-media trajectories);
  - recently: course offerings in collaboration with adjacent branches;
  - main target group: deployed graphic technical craftsmen, who face changes.
- Training for the unemployed:
  - 'entry projects' for unemployed persons from 'risk groups' on the labour-market;
  - re-entry projects' to qualify unemployed graphical craftsmen for new jobs;

- coordination by regional platforms for joint consultation and elaboration of regional labour-market and training policies for the sector;
- special employment-exchange bureau for the printing sector for job consultancy, outplacement, etc.

Latvia

- dominant role of state governed initial education;
- no sectoral training policies and provisions;
- weak relationships between schools and printing enterprises.

3.5 Assessment of results on firm level

United Kingdom

- assessment based on recent survey among printing enterprises;
- nearly one-third of production workers received recent training;
- 9 out of 10 companies provided recent training;
- around 7 percent of the companies interested in implementation of NVQs
- two-thirds of companies sees need to upgrade skills in coming years;
- conclusion: many companies offer training, but only limited number via NVQ route.

Norway

- no statistical data available; assessment based on expert opinion;
- thus far, 'implementation projects' have been initiated only on a small scale;
- extension to more companies is foreseen;
- sectoral training network is not working optimally, but improvement is foreseen;
- main problems: high tech oriented Gaphic Institute versus union-owned local RCCs.

Belgium

- no statistical data available, assessment based on expert opinion;
- SMEs are main target group of training initiatives sponsored by sectoral funds;
- typical SME bottlenecks: limited need awareness and articulation, need for flexible training supply, risk of under investment in training because of absenteeism problems.

The Netherlands

- assessment based on statistical data and expert opinion;
- during nineties: shift from participation in longer courses towards shorter specialist courses;
- short courses mostly related towards new technologies;
- with its training infrastructure printing industry very successful in response to new technology;

- smooth incorporation of innovations, without large dismissals and social upheaval;
- unequal spread of training among different sub-segments; SMEs stay behind;
- shift towards specific training brings with it the risk of erosion of occupational craftsmanship.

Latvia

- assessment based on expert opinion;
- no sectoral provisions, no impact on firm level;
- big firms train specialist themselves or send them for training to Western countries.

3.6 Trends in main environmental factors

United Kingdom

- nineties: economic crisis followed by light recovery with fierce competition causes decrease of employment opportunities; trend towards polarization between large integrated firms and small niche players;
- growing impact of modern technology (electronics, digital printing, multimedia) on branch structure, company strategies, job profiles and skill requirements;
- impact of fading away of traditional borderlines of printing industry on vocational education and training system;
- strong impact of educational legislation concerning NVQ standards and Training Targets on sectoral training infrastructure;
- growing dominance of employers in industrial relations has lead to dominant role in training arrangements;
- recently, more involvement of unions through collaborative agreements on recruitment and training.

Norway

- nineties: economic crisis followed by light recovery causes decrease in employment opportunities; trend towards integrated production and specialization occur simultaneously;
- growing impact of new technology in pre-press and printing phases of production; more broadly defined jobs; higher qualifications required;
- fading away of borders between pre-press, printing and publishing processes has led to initiatives 'to develop new programmes for vocational education in 'media and communication';
- traditionally strong position of unions in industrial relations has lead to strong influence of unions on continuing training initiatives and strong employee-oriented nature of training regulations; union strategy of flexible response to new printing technology facilitated collaborative training initiatives;
- to be expected: impact of legal entitlement to continuing training for all employees regardless of sector.

Belgium

- important factor is the changes in the biannual Interprofessional Agreements; joint sectoral training agreements largely depend on them;
- evolutions in the definition of target groups and in fund raising affected the training initiatives in the printing sector; reductions in levy percentage threaten joint sectoral training provisions;
- quick evolution of technology raises qualification requirements in prepress and printing processes;
- rapid development of new media (electronic communication media; mass media) causes sectoral funds to invest large sums in training equipment and new technology-based training material.

The Netherlands

- changes in sectoral system of labour relations (fading away of closed-shop) erodes monopoly of social partners in the regulation of labour in the printing industry;
- new developments in technology and work organization eroded traditional craftsmanship and changed occupational profiles and qualification requirements, particularly in pre-press processes;
- new products and technologies strongly influenced the external organization of the printing sector i.e. its relationships with other sectors; fading away of traditional borders brings sector to a stage of reconstruction into a wider media and communications industry; training agencies increasingly cooperate with agencies in affiliated sectors, like the audiovisual branch;
- new law on vocational and adult education introduces a.o. a national qualification structure and a new system of regional organization of training provisions; printing sector among the first to adopt the new structure.

Latvia

- to be expected: improvement in the relationship between schools and employers; this will increase training awareness among employers and training opportunities for employees;
- growing discrepancy between technological developments, demands of the labour-market on the one hand and (traditional) training curricular at the other hand, will cause tensions and increase the need for more intermediate regulations and institutions.

4. Overview of the training systems in the hospital sector

The following pages give a comprehensive overview of the training systems in the hospital sector in the different countries. This overview is also structured according to the research model (see chapter 2) and based upon the information in the national reports. The overview covers the following aspects:

- the articulation of the sectoral level;
- training agencies and bodies;
- agreements between sectoral agencies;
- sectoral training policies and provisions;
- assessment of results at the institute/firm level;
- main trends in environmental factors influencing the training systems.

The information is presented in the form of qualitative overviews. The overviews contain in keywords the main data about the topics mentioned above. With the help of these schemes we can get a more systematic picture of the main differences between the sectoral training systems in the countries involved. These will be discussed in the Chapter 5.

In the study of the hospital sector only four countries were involved. For practical reasons the national report of the United Kingdom could not be completed within the framework of this project.

4.1 Articulation of the sectoral level

Norway

- hospital sector is part of public sector; national health service; State-led health-care system;
- strong influence of medical professions on State policy: the 'profession state';
- legal regulations concerning organization and financing of vocational education and continuing training for doctors and nurses, regarded as government employees;
- two separate circuits of training: circuit of (specialist) training for doctors and circuit of training for nurses and nursing assistants; connections via county and hospital budgeting system;
- separate 'Main Agreement' between social partners for the county hospital sector, including agreements on training;
- one Special Agreement for senior specialists concerning continuing education;
- no Special Agreements for nurses or other categories of health-care personnel;
- overall conclusion: limited articulation of sectoral level in continuing training;
- in 1997: new initiatives launched by government to strengthen position of institutions at sectoral level.

Belgium

- sector contains both public and private hospitals; social partner-led health-care system;
- two separate circuits of training: circuit for medical specialists and circuit for nurses; no connections between the circuits;
- since 1981 special legal regulations concerning financing and funding of continuing training;
- since 1988 training paragraph part of 'Interprofessional Agreements' (IPA) between social partners; defines objectives and sets limits for sectoral negotiations;
- training paragraph IPA further elaborated in Collective Labour Agreements for the private hospital sector; focus on training for the unemployed.

The Netherlands

- sector contains both public and private hospitals; social partner-led health-care system, with private sector elements;
- two separate circuits of training: circuit for medical specialist and circuit for nurses and nursing assistants; no connections between the circuits;
- no legal regulations concerning continuing training for employees; considered as a responsibility of the social partners;
- since 1982 training part of Central Agreement between social partners, with status of 'recommendations' for negotiations in sectors; basis for many sectoral training initiatives;
- training paragraphs further elaborated in Collective Labour Agreements for the hospital sector (excluding medical professions); negotiations take place within budgetary limits set by government;
- besides training paragraphs included in agreement between government and social partners on a national policy framework for the sectoral labour-market.

Latvia

- centralized, state-led health-care regime; no private institutions;
- initial and continuing vocational education and training run by the State Ministry of Welfare;
- strong legal regulations concerning continuing training for doctors and nurses through system of registration and training credits;
- basic education, continuing education and registration for both doctors and nurses coordinated by one institution: the Centre of Medical Professional Education, i.e. part of the Ministry of Welfare; close ties with the hospitals;
- in addition, professional associations of nurses and doctors involved in continuing training;
- no role for social partners at the national and sectoral level.

4.2 Training agencies and bodies

Norway

- key agencies: governmental agencies of Ministry and counties, which allocate hospital budgets, including budgets for education and training for nurses and doctors;
- county hospitals and State colleges, which fund and provide continuing training for nurses and doctors from their health block-grant budget;
- universities and related research institutes, which take care of specialist further training for doctors;
- Educational Funds, which are established by a tripartite agreement among the State authorities, the Association of Norwegian Municipalities (employers) and the Norwegian Medical Association (professionals); these organize short courses for medical specialists, deployed by the hospitals;
- traditionally, the special division for development, education and training of the Norwegian Medical Association organizes specialist training and certification for its members; several professional associations also offer continuing training;
- new plans in 1997: stricter State control in training of medical specialists by establishing a new National Council with 5 Regional Councils for specialist training; these are a collaboration of State authorities, health regions, universities, the municipalities and the medical association;
- social partners are involved in the Main Agreement for the county hospital sector, i.e. Association of Municipalities with a number of employees organizations of e.g. nurses, physiotherapists, radiologists, etc.

Belgium

- two trade unions - one Christian, the other socialist - and one employers association involved in continuing training in the printing industry;
- in early nineties: establishment of a sectoral training fund in the private hospital sector; both the unions participate, together with the employers' organization which covers all private hospitals; the fund is financed by an employers' levy on gross wages, with the percentage derived from biannual interprofessional agreements;
- next, there are 4 professional organizations for nurses (Catholic/neutral; Flemish/French), who organize postgraduate training programmes for graduate nurses;
- for specialists, there is the 'Order of Doctors', a professional organization, which safeguards professional quality standards and performances;
- public Employment agencies play an important role in training and retraining of unemployed persons for the hospital sector;
- private training institutes play a limited role in the hospital sector.

The Netherlands

- dominant actor is the national government, i.e. Ministry of Health Care; it legislates and certifies educational provisions, finances training provisions in hospital and sets

budgetary limits for negotiations between social partners in matters of wages, employment and training;

- Employers' Federation in the care sector, which covers 6 different branches, including the hospital sector;
- three trade unions on the employees side: a Christian trade union, a socialist trade union for government employees, and a federation of associations of higher employees; the last covers 13 national professional associations, for physiotherapists, psychologist, hospital pharmacists, etc.
- in 1990: establishment of tripartite sectoral fund for employment, labour-market and training (AWOZ);
- for some years, AWOZ has been establishing regional bodies (TSO) for coordination of regional labour-market and training policy; in collaboration with regional hospitals and social partners;
- public Employment Exchange, with its regional offices, offers training for the unemployed who want to enter the hospital sector;
- universities, academic hospitals, working communities and professional associations, who provide opportunities for further study and training for doctors and medical specialists.

Latvia

- under communist regime, vocational education and training were totally planned and financed by the State, i.e. the Ministry of Welfare; in broad terms, this is still the case; training curricula are affirmed by a supportive organization, the Centre of Medical Professional Education and Training (MPIC);
- MPIC has 3 departments: for Basic Education, Continuing Education and Training and the Department of Registration; activities are financed by State budgets;
- professional associations, i.e. the Latvian Nurses Association and the Latvian Doctors
- Association take part in development of training programmes and certification;
- main agencies are the general hospitals themselves, where training takes place.

4.3 Agreements between sectoral agencies

Norway

- nineties: special Main Agreement for the county hospital sector between the Norwegian Association of Municipalities and a series of employees organizations including the Medical Association, the Nurses Association, the Association of Physiotherapists, etc.;
- main Agreement: defines types of training, obliges hospitals to make training plans, obliges employees to participate in training, specifies conditions for paid training leave and reimbursement of training costs;
- Branch-specific Agreement between Norwegian Association of Municipalities and Norwegian Medical Association, which establishes an educational fund for specialists and specifies the conditions for a prolonged training leave.

Belgium

- eighties: bi-annual Interprofessional Agreement between social partners; defines target groups for training and levy arrangements for the sectoral training funds;
- evolution in target groups: in early years accent on youngsters and job-seekers, i.e. the unemployed; recently, under pressure of the employers, more attention paid to employees;
- evolution in fund raising: gradual raising of levy percentage; recently: part of budget reallocated from active (training) to passive labour-market measures (pensions);
- based on IPA, in 1989 and 1993 training paragraphs included in the Collective Labour Agreement for the private hospital sector; emphasis on training for the unemployed;
- from the beginning hospital sector respected the IPA target-group definition and focussed on so-called 'risk groups' at the labour-market, especially long-term unemployed, migrant workers, re-entering women, lower-qualified employees.

The Netherlands

- in 1990: 'Policy Agreement labour-market intramural health-care sector', between the government and the social partners; goal: improve the functioning of the labour-market by developing a coherent employment, labour-market and training policy for the sector and by creating a number of infrastructural provisions to reach this goal;
- in 1995: prolongation of the Agreement by the government, the social partners and the public Employment Exchange;
- in 1992: covenant between the government and the social partners to set up the sectoral training and employment fund AWOZ; since then: AWOZ stimulated the development of regional covenants between the social partners, regional hospitals, regional state authorities and the regional employment services to coordinate regional labour-market and training initiatives;
- in 1996: new Collective Labour Agreement for the hospital sector included separate paragraphs on in-company social policy and on education and training for employees.

Latvia

- close relationships between the Ministry of Welfare, the MPIC-departments, vocational schools and the hospitals within the centrally-planned and directed education and training system;
- in practice: only weak cooperation between the State training system and the professional association of nurses and doctors; agreements mostly based on personal consultation and contacts.

4.4 Sectoral training policies and provisions

Norway

- in fact, real sectoral training policy has not come into existence, by virtue of lack of clear articulation of sectoral level as separate policy level; training policies/provisions are largely determined by government through budget allocations to counties and county hospitals;
- Employers' and employees' organizations have not developed clear vision on sectoral training policies; key role is played by hospitals and colleges themselves;
- in 1997: government launched new policy to get more influence in special health services, including training for specialists; proposed are the establishment of:
  - regional health committee, to work out regional health plans, including trainee positions;
  - national and regional health councils for training of medical specialists;
  - councils responsible for organization of training and quality of provisions;
- in 1997: government launched plans to get more influence in budget expenditure within hospitals for training: more documentation of training expenditures, closer connection of training to task analysis, research and development in the hospitals, appointment of person responsible for education and training.

Belgium

- Policies/provisions of the sectoral training fund:
  - strong emphasis on training of risk groups/unemployed;
  - guidance in the case of collective dismissals;
  - initiatives concentrated on job-preservation;
  - research into qualification and training needs.
- Policies/provisions regarding training for risk groups:
  - main target groups: handicapped, job-seekers, employees threatened with dismissal;
  - subsidy schemes for all types of shorter and longer training and retraining courses;
  - close collaboration with the public employment services, including cofinancing;
  - three types of facilities for trainees: reimbursement of study costs, 12 weeks of paid study- leave, subsidy scheme for work experience placements;
  - also provided are job-counselling and job-coaching services for trainees;
  - training takes place in hospitals and at vocational schools.
- Special policies/provisions for long-term, lower-qualified unemployed:
  - initiative of social partners to create jobs for low-qualified persons: 'logistic help';
  - within the framework of governmental job-creation schemes;
  - special training programme designed, with certification at lower secondary level.

The Netherlands

- General policies of sectoral training fund AWOZ:
  - employment policies, i.e. subsidy scheme to stimulate influx of risk groups in sector;
  - regional policies, i.e. development of structural labour-market policies in regions;
  - migrant worker policies, i.e. subsidy scheme to stimulate their entry into hospitals;
  - mobility policy, i.e. measures to stimulate rotation of personnel;
  - training policy, i.e. development of training initiatives and training plans in hospitals;
  - policy for training of the unemployed.
- Training policies and provisions of AWOZ Training department:
  - main activities: providing information, financial support and facilities for training policy development within the hospitals;
  - important instrument: subsidy scheme for stimulation of training policy development; subsidy scheme evolved from subsidizing individual courses towards subsidizing training plans of hospitals and from subsidizing according to predefined criteria towards subsidizing in a flexible way;
  - several other instruments used to stimulate systematic training plans in hospitals: research into training planning, courses about training planning, network of training planners, handbook and software programmes on training planning, etc.
- Training for the unemployed:
  - closely related to job-creation programmes of AWOZ;
  - target groups: long-term unemployed, migrant workers, older women, re-entering the labour-market;
  - special subsidy schemes for these target groups;
  - projects/activities connected with governmental job-creation plans for lower-qualified people;
  - important role of public employment service in execution of plans and subsidy schemes.

Latvia

- no specific sectoral policies, owing to lack of articulation of the sectoral level as separate policy level;
- training policy is determined by the state-based MPIC; within the MPIC basic education, continuing training and registration are organized into one system;
- MPIC offers courses, certificates and keeps a register of qualified nurses and doctors;
- MPIC defines criteria for further training, awards credit points and periodically reviews possibility for registration;
- MPIC defines requirements for (re-)certification and content of training courses, in collaboration with the professional associations; certification exams are organized by the professional associations of nurses and doctors.

4.5 Assessment of results on firm level

Norway

- no statistical data available; assessment based on expert opinion;
- traditionally, strong influence of medical professions on training issues;
- with new plans government: more State influence, especially on specialist training;
- this will probably induce a tendency towards 'sectoralization' in the hospital sector;
- several problems occur at the moment, in relation to training for assistant levels, organization of work-practice training, ratios of nurses and assistant nurses, transfer of training from the hospitals to the State colleges.

Belgium

- no assessment has been made.

The Netherlands

- assessment based on statistical data and expert opinion;
- during nineties: strong increase of participation in training courses for employees;
- a growing number of employees are using AWOZ subsidy schemes;
- growing number of hospitals are working with training plans;
- the training fund is well known among hospitals, most hospitals are satisfied with its activities;
- 3 out of 4 hospitals state that the activities of the fund have a positive effect on the development of a structural training policy within their institute;
- nearly half of the hospitals state they would have done less in training if the fund did not exist;
- conclusion of experts: employment and training fund played important role in reducing
- labour-market and qualification problems in the hospital sector.

Latvia

- assessment based on expert opinion;
- hospital sector in Latvia faced great problems in the nineties, because of decreasing subsidies from the State and decreasing number of patients;
- mid-nineties: situation of labour-market surplus, closing down of some medical schools, reduction in the amount of training in the hospitals.

4.6 Trends in main environmental factors

Norway

- traditionally strong influence of the medical professions on health policies and provisions, including those for medical education and training; trend to stronger

political control by regionalisation of health-care budgeting and planning; regional hospitals become the centre of the system;

- trend also implies stronger political governance of the training system; mainly through the establishment of national and regional councils dealing with (specialist) medical training; professions come into a more advisory role;
- increased political and State control is accompanied by a tendency towards sectoralization; patient centred approach common denominator among health professions; partial reduction of professional point of view;
- growing influence of new system of regional health-planning will increasingly affect the autonomy of the regional hospitals, also concerning manpower planning and training issues;
- new medical technology and medical treatments have increased qualification requirements; growing need for doctors and higher qualified nurses; jobs for nursing assistants have almost disappeared in hospitals;
- shortage on labour-market in field of qualified nurses leads to deployment of less qualified employees in nursing positions; pressure on training system to develop shorter programmes; resistance from nurses professional associations.

Belgium

- limited influence of environmental factors on the sectoral training system;
- sectoral training funds depend on interprofessional agreements; hospital sectors training fund follows policy guidelines of these agreements; only few changes in course of time regarding target groups for training, funding of training, etc.
- important factor in years to come: changing demand for care because of ageing of the population; tendency towards more care at home, less care in hospitals; training efforts will also shift in future;
- new developments in medical technology and work organization primarily affect higher level staff, i.e. medical specialist; position, job profile and qualifications of nurses are less affected.

The Netherlands

- most important factor: situation on the labour-market; labour-market shortages were the main reason for government and social partners to develop coherent sectoral employment, education and training policies and provisions;
- changes in the occupational structure within the hospitals will affect the training system for nurses in the future; tendency to create lower-qualified jobs below the level of qualified nurses will create demand for new, shorter training programmes; tendency to integrate part of doctors' tasks with tasks of higher qualified nurses will probably lead to new programmes for further training;
- new law on vocational and adult education will introduce structure of national vocational qualifications, new regional educational colleges and shift of training responsibilities from hospitals to state colleges.

Latvia

- EU support led to renewal of training curricular for nurses;
- improvement of relations between hospitals and schools will increase training efforts and effects;
- growing demand for nursing assistants in hospitals causes tension in training system.

5. Major differences and trends

With the help of the schematic overviews, presented in the previous pages, we will now go on to discuss the main differences between the sectoral training systems in the countries involved. This will give a first impression of the value of the applied research model. The discussion will not be exhaustive - that would exceed the intentions of this study - but will focus on the basic elements of the model used to describe and analyse the systems. After having described the major differences, we will highlight the main trends which become visible in some of the more developed sectoral training systems.

5.1 Articulation of the sectoral level

On the whole, sectoral training systems have been most clearly developed in the printing sector; in the hospital sector the picture is more diffuse. This conclusion holds In the first place, the overviews point to clear differences in the articulation of the sectoral level as a separate level for the organization of continuing training activities. Especially relevant are differences regarding the state of development of sectoral training initiatives, the coherence and coordination of these initiatives and the (legal) constitution, regulation and legitimation of the agencies and bodies involved (cfr. Blanpain et al, 1994; Heideman et al, 1994).

On the whole, sectoral training systems have been most clearly developed in the printing sector; in the hospital sector the picture is more diffuse. This conclusion holds for all the countries involved, with the exception of Latvia, where so far hardly any sectoral initiatives have been taken either in the printing or in the hospital sector.

In the *printing sectors* of Norway, Belgium and The Netherlands highly developed sectoral training systems do exist at the moment, each based upon a long tradition of sectoral 'governance' of employment and education issues, each embedded in a specific legislative framework and each moulded into a coherent whole through specific coordinating institutions. The system in Norway seems to be more union-driven than those in Belgium and The Netherlands, where they are a clear product of collaborative efforts of both employees' and employers' organizations. In Norway the unions also still hold their own training provisions, in addition to the joint initiatives they have developed with the employers' federation. In Norway and Belgium the systems are based on explicit governmental legislation concerning continuing training. In The Netherlands such legislation is lacking; here, agreements between the social partners fulfil the main constitutive role.

An interesting development has occurred in the United Kingdom printing industry. During the eighties, the established social partner-led training system was broken down by liberal government and replaced by a system of voluntary initiatives, with the employers' organizations in a leading role. Recently, however, the system was reconstructed

through the conclusion of a joint training agreement and the establishment of a joint training council. The employers still play a dominant role, but union influence has clearly increased within this new collaborative initiative. Besides, the role of the government has become more important, with the introduction of new legislation and new governmental policies concerning education and training. Both employers and unions now operate within a policy framework that sets legal standards for certification of both initial and further training (NVQs) and national targets for participation in training. This new system offers better opportunities for correction of failures on the training market, both through State interventions and through joint actions of the social partners.

The situation in the *hospital sector* is rather different from that in the printing sector. Here, the sectoral level is less articulated. The role of State agencies and public policies is more important, as well as the role of the hospitals themselves. The clearest example is provided by Latvia, where the training system for the medical professions is fully organized by central State regulations and forms a part of the central State apparatus - one of the legacies of communism. But also in Norway, through their planning and budgeting arrangements, State authorities have a great influence on education and training in the health-care sector. Decision-making in Norway is more decentralized, however. Budgets, including training budgets, are allocated to (regional) counties and, via them, to the regional hospitals. Regional hospitals are obliged to draw up training plans. Counties and hospitals are largely autonomous in deciding how to spend the budgets for training allocated to them. A factor which may explain the large influence of State authorities in the training system in Norway and Latvia is the fact that both countries have a national health service, fully financed from public resources. This implies that both nurses and doctors are on the payroll of the hospitals.

This is not the case in Belgium and The Netherlands. In these countries health care is a mix of public and private initiatives and besides public hospitals there exists a segment of privately-financed hospital care. Besides, both in Belgium and The Netherlands there is a big difference between the legal position of the nursing occupations and the medical professions. Usually, nurses are in service of the hospital, whereas doctors and medical specialists are self-employed, run their own clinics and are paid directly by their clients. The training systems reflect this mix of public of private initiatives. Besides public authorities, the social partners and representative organizations of privately organized professional associations (medical specialists) also play an important role. In both Belgium and The Netherlands, they operate within legal and financial frameworks set by the State. Within these frameworks, however, they have autonomy to regulate their own affairs.

5.2 Role and agreements of main agencies and bodies

In line with the differences in the level of sectoral articulation, we can expect to find differences regarding the position of the main agencies and bodies in the sectoral training systems. As the overviews demonstrate, this is indeed the case. There are clear

differences regarding the role of State agencies, educational institutes, employers' organisations, trade unions, regional and local authorities, employment exchange agencies, in the sectoral policy networks. Different types of agreements have been made to stimulate joint training policy development. Different types of agencies and bodies have been established to coordinate the implementation of commonly agreed upon training policies.

As the overviews demonstrate, a crucial element in the development of sectoral training systems, is a *collaborative agreement between the social partners*, i.e. representative organizations of the employers and the employees in the sector. Where such agreements have been concluded, as in the printing industry in the UK, Norway, Belgium and The Netherlands and in the hospital sector in Belgium and The Netherlands, sectoral training systems have had good opportunities to spread off, whereas in situations where such specific agreements are lacking, like in Latvia or in the Norvegian hospital sector, continuing training policies and activities are much more dispersed. One of the reasons why, on the whole, continuing training is more 'sectionalized' in the printing industry then in the hospital sector is in fact this stronger joint involvement of the social partners.

Within the printing sector, there are, however, also differences between the countries regarding the types of arrangements made between the social partners. These differences reflect underlying differences in the tradition of industrial relations and in the balance of power between the major parties involved. In the United Kingdom, with its 'liberal' tradition, the employers seem to have the strongest position in the printing trades training system, while in Norway, with its strong labour movement, the graphical trade union seems to be the most influential party. In Belgium and The Netherlands, with their long tradition of joint consultation and joint collective bargaining, also on the sectoral level, the situation seems to be most balanced. Here, in fact, employers' and employees' organizations jointly regulate and administer employment, labour-market and training affairs in the sector. In each of these countries, there are also agreements on training with the government, but the initiative to close these off has come from the social partners.

In the hospital sector, *State authorities* play an important role in the continuing training systems (as they do also in initial education). Most clearly, this is the case in Norway and Latvia, with their well-developed public national health services. Here, State agencies are dominant actors in the field of training. With their legal, financial and administrative instruments they directly influence training policies, plans and activities in the hospitals. Joint agencies of employers and employees have only a limited influence (Norway) or no influence at all (Latvia). In Latvia almost everything is arranged on the level of central government. In Norway arrangements are more decentralized. Here, the central government defines and allocates the budgets for training. Regional authorities and regional councils further decide on how to use these budgets for specific training activities in the hospitals. In both countries coordination of training on the sectoral level is lacking.

In Belgium and The Netherlands, sectoral coordination is more developed in the hospital sector because, here, the employers and employees are more influential and have established joint agreements, agencies and bodies in the field of training. Also in these countries, however, the social partners do act within (financial) frameworks set by the State. Usually, the State agencies operate at some distance. Joint agreements are mostly of a tripartite nature, with the State representatives in an equal role to the social partners. The agreements usually respect the autonomy of the social partners concerning training policy planning and allocation of training budgets.

In the printing industry, training activities are usually initiated by the social partners and coordinated by some kind of collaborative agreement. In the hospital sector, besides the social partners, several types of *professional associations* also play an important role. In all the countries involved, especially on the higher level of the occupational structure, i.e. the level of doctors and medical specialists, strong professional systems for continuing training have come into existence. In Belgium and The Netherlands, with their mixed system of public-private health care, the medical associations have established their own exclusive training arrangements, including provisions for training planning, curriculum development, allocation of training places and certification. Usually, training takes place within clinics under the guidance of the specialist communities themselves. There are general agreements with the government concerning the level and number of trainees, but the responsibility for the content of training solely rests with the (private) medical associations. In Norway, with its national health service, the government has more control on the medical professions, because they are on the payroll of the hospitals, but also in this country, traditionally, the professions have operated in a rather autonomous way ('profession state'). Both in Norway and in The Netherlands, however, recent negotiations between the government and the medical associations have culminated in new regulations which involve the medical professions more closely in health care administration and in the hospitals organization. In the field of training this will probably lead to more influence from the side of the government and the employers (hospitals) on issues like access to specialist training and allocation of training budgets. In the longer run, this may lead to the introduction of sectoral elements into the existing professional training systems and to better links between the training systems for doctors and specialists and the training systems for nurses. At the moment, most professional training systems are separately organized according to scientific discipline. Neither in Belgium and The Netherlands, nor in Norway are there many interconnections with the (sectoral) training systems for nurses and other hospital occupations.

In most countries - an exception is Latvia - the professional associations of nurses, as far as they exist, have 'merged' to a certain degree with the trade unions or have established collaborative relationships with them. In The Netherlands, for instance, the association of nurses (and other medical occupational groups like physiotherapists, laboratory staff, radiologists) is one of the partners in the collective bargaining process. Together with the unions it is responsible for the collective labour agreement for hospital personnel and for the arrangements regarding training included within it. In Norway and Belgium the associations of nurses have also taken this position. In Latvia, the situation

is different. Here, there are no trade unions. The association of nurses (as well as that of doctors) is the only representative organization of employees. Formally, it deals directly with the State agencies responsible for training planning and curriculum development, and with the hospitals, which are responsible for implementing training. In practice, however, collaboration between the professional associations, the schools and the hospitals is difficult.

As the overviews demonstrate, in some countries sectoral training initiatives are not limited to workers already deployed in the sector, but extended to persons who are unemployed and who are interested in entering or re-entering the sector. For this, separate agreements between sectoral training agencies and (regional) *employment exchange agencies* are made. Especially in Belgium and The Netherlands this is the case, both in the printing industry as well as in the hospital sector. The clearest example is provided by the Belgian training fund for the hospital sector, which almost exclusively directs its efforts towards the unemployed. On the other hand, the training fund in the Belgian printing sector, considering every employee as an employee 'at risk, i.e. continuously threatened with unemployment, is more oriented towards the employees. The training funds in The Netherlands are less exclusive. Both in the printing industry as well as in the hospital sector, they offer a rather balanced supply of courses for both employees, the unemployed and other special target groups on the labour-market. In Belgium and in The Netherlands, the training programmes for the unemployed are mostly executed with financial support from the employment service.

In every country, in both sectors, the most important *providers of continuing training* are the schools or colleges for vocational education (mostly State-owned), the providers of apprenticeship training and the firms (printing industry) and institutes (hospital sector) themselves. Most programmes and courses for continuing training, both for employees and the unemployed, are provided by public institutes and coordinated by the sectoral agreements. As far as the printing sector is concerned, there is some activity by private providers, for instance suppliers of printing equipment. But training in the hospital sector - besides the professional circuits - is almost exclusively a matter of public agencies. New legislation in the United Kingdom and The Netherlands (NVQs, training targets) tries to break down the 'public monopoly' slightly and to open up the training market for private initiatives, but it would appear without much success so far. In all the countries involved, both in the printing sector as well as in the hospital sector, private providers clearly play a less important role then they do in other sectors.

5.3 Actual policies and provisions

With these different levels of sectoral articulation, these different roles of agencies and bodies and these different levels of coordination between agencies, operating within a sector, one also can expect to find major differences regarding the actual training policies and provisions which have been developed. The overviews in chapter 3 and 4

indeed demonstrate a large amount of creativity in this respect. In this paragraph we will not discuss all the differences in detail - that would exceed the objective of the study. But some important differences have to be highlighted.

First, there are important differences regarding the *financial arrangements* for continuing training. Collaboration between sectoral agencies mostly also has a financial aspect, but how the financial arrangements have been elaborated differs from country to country, depending on factors like legal obligations, industrial relations, relations between initial and continuing training, homogeneity and coherence within a sector, training traditions, etc. In the social partner-led printing industry of Norway, Belgium and The Netherlands, with their long tradition of collaborative 'sectoral administration, joint sectoral training funds have been established, which are financed by a levy on gross wages of the companies involved. Added to these private budgets are often all kinds of public budgets, like subsidy schemes of employment agencies, cofinancing of initiatives by regional authorities, targeted money from the European funds, etc. In the State-led health care sector of Norway and Latvia on the other hand, training institutes and programmes are almost exclusively financed by the government, whether directly, in Latvia, or indirectly through the allocation of training budgets and trainee positions to regional authorities, in Norway.

Another major difference with respect to the training funds concern the expenditure side, i.e. their *subsidy schemes and procedures*. An important question here is whether a sectoral training fund merely acts as an equalization fund or whether it develops its own funding policies and tries to influence training activities in the sector by giving targeted financial impulses. In The Netherlands, for example, most training funds, including that in the printing industry, started as equalization funds, but gradually developed themselves into direct players on the training market by elaborating their own policy objectives, criteria for subsidies, guidelines for training programme development, etc. In Belgium, from the beginning, the training funds have had a more targeted objective, i.e. to channel money from the working segment of the sector to the segment of the unemployed. Both in Belgium and The Netherlands, the training funds are attributed an important role in the correction of failures on the (private) training market.

There are also differences among the *target groups* of training, as defined by the sectoral initiatives. Target groups are defined along three lines: employees within the sector versus employees in affiliated branches, level of qualification of the employees and employees versus unemployed groups of workers. On the whole, across the countries, there is a difference between the printing sector and the hospital sector regarding these aspects. The sectoral training initiatives in the printing sector generally seem to be more exclusive than the sectoral initiatives in the hospital sector. Both in the United Kingdom, Norway, Belgium and The Netherlands, employees are the main target group of the sectoral training initiatives, in particular graphical technical employees deployed in companies associated within the organization of graphical employers and organized within the graphical trade union. In the hospital sector, more efforts are aimed at the unemployed and other risks groups at the labour-market (i.e. people outside the sector)

and more money flows into special projects for lower qualified persons, both employed and unemployed. Two circumstances may explain this difference. First, traditionally, the printing industry is marked by a closed-shop system of industrial relations, which implies among other things that only organized workers have access to all kinds of sectoral provisions; in the hospital sector no such system exists. In the second place, the situation on the labour-market in the printing industry differs from that in the hospital sector. The printing sector is marked by worker redundancy, while the hospital sector is confronted with labour market shortages. Redundancies normally lead to a closure of the sectoral labour-market in order to protect the existing workforce, whereas shortages stimulate an opening up in order to get a greater influx of new entrants into the sector. In the last case, the trade unions also have an interest in broadening target group definitions to apply to persons outside the traditional sectoral borders.

A fourth difference concerns the *types of training* developed and offered to the sector. Sectoral training agencies have a broad range of choices in this regard. They may emphasize for instance longer courses versus short types of training, training for recognized certifications versus uncertified courses, off-the-job training versus in-service training, training in traditional fields versus training related to innovations, etc. Currently, the training institutes in the printing industry, for example, stress the importance of training for new technologies (multimedia, computerized pre-press, digital printing). They stimulate the development of an off-the-job, technology- related supply of new courses and curricular, often in collaboration with training institutes in adjacent branches. The training institutes in the hospital sector, in contrast, stimulate not only off-the-job courses but also on-the-job training and workplace-related learning, sometimes in connection with the introduction of new types of medical technologies and medical treatments. In the course of time, the policies of the sectoral institutes may evolve and change priorities, as we see for instance in the Dutch hospital sector. Here, the sectoral training fund started supporting specific courses, which fitted into its own policy priorities. Later on, however, it changed by course and rather than subsidizing specific courses it started to subsidize whole training plans. In this way it tried to stimulate systematic training policy development in the hospitals. At the moment, besides formal training, the fund considers the possibilities for supporting informal learning activities in the workplace.

This brings us to the fifth point: the aspect of *certification of training*. The countries and sectors differ also in this respect. A very peculiar form of certification can be found in the Latvian hospital sector. Here, both qualified nurses and doctors are registered by the State. Periodically, they have to regain this registration by demonstrating that they have participated in a certain amount of continuing training. If they fail, they are not allowed to fulfil their function anymore. However, as we said earlier, this registration is not so much part of a sectoral system as of a State-led training system. Certification of continuing training in the other countries is rather limited. There are certificates, connected with training courses offered or supported by the sectoral institutes, but mostly these certificates are only recognized by the branch and not by the government; in this sense, their effect on the labour-market is limited. In the UK, and also in The Netherlands, new

structures for certifications have recently been introduced: the national vocational qualifications structures, which apply both to initial as well as continuing training. The printing sectors in both countries were among the first to introduce these standards.

5.4 Trends in developed sectoral training systems

After having described the major differences, we now will conclude this chapter with a discussion of the main trends in the printing industry and the hospital sector which are revealed in the countries with the most pronounced sectoral training systems, i.e. Norway, Belgium and The Netherlands.

1. A first important point, which is illustrated by both sectors, is the great influence of *environmental factors* on the development of the sectoral training systems. In both sectors changes in the employment system have a dominant influence: changing labour relations and new technologies in the printing industry, changes on the labour-market and changes in the occupational structure in the hospital health-care sector. These factors firstly affect continuous training, but secondly also initial training. Besides, in both sectors, there is also the influence of developments in the educational system, as illustrated for instance by the new British and Dutch legislation on vocational education and training. This factor particularly affects the qualification structures, training programmes and institutional arrangements of initial training. But continuous training is also affected, like in the Dutch printing industry where modules of the initial apprenticeship programmes are often used as courses in the supply of further training for employees. Or in the printing industry in Britain where both initial and further training programmes come under the same system of certification.

2. However, as the sector studies clearly demonstrate, environmental factors only demarcate the field in which the sectoral agencies can play their games. Once established, the training systems develop their own specific *sectoral dynamic*, which leads to different types of institutions, agreements, policies and provisions and -ultimately- to different types of activities at sectoral level. Differences between the printing and the hospital sector, for example, have to do with the availability of training institutes and training funds and with financial arrangements, subvention schemes and rules and company support structures (see previous paragraph).

3. An important role in this sectoral dynamic is played by the *research provisions* of the sectoral training agencies. In both sectors, as part of their training policies, the sectoral agencies have developed extensive systems for employment and labour-market research, training needs analysis, monitoring of developments and occupational information services. Provisions have been established at a national and sometimes also at a regional level. Most actors consider research and information exchange as important tools for improving the communication between training institutes and the business community in the sectors and so maintaining the quality of the qualification structure and the training programmes.

4. Thus, the sector studies demonstrate that training policy development increasingly becomes a *' devolved process*. As the autonomy of sectoral and local actors increases, decisions concerning training policy development increasingly take place on decentralized levels. Here, a multitude of agencies are active, each with its own interests, objectives and strategies. The existing training institutes of the sector often play a major role. But agencies other than the traditional training institutes may also enter the field and become involved (social partners, regional State authorities, employment exchange services). Various types of public-private partnerships may develop, as the printing industry demonstrates. In such a situation the role of State agencies may evolve from 'manager' towards 'partner' within a sector's training system. Thus, not only at the national level, but also on sectoral levels the question of the 'politics' of training becomes relevant.

5. If we look at target groups, it is clear that the sectoral training policies and provisions - at least those for continuing training - are particularly directed towards *medium qualified employees*: graphic technical craftsmen in the printing industry, nurses and caretakers in the hospital care sector. In Belgium and The Netherlands, there is also some attention paid to lower qualified persons ('assistants'), especially within the framework of labour-market programmes and job-creation schemes. Higher qualified workers, however, stay almost totally out of the picture. As the hospital sector clearly demonstrates, they have their own professional training systems, which hardly interact with the sectoral systems.

6. It has proved difficult to make a good *assessment of the results* of the sectoral training efforts at the firm level. Also in Belgium, The Netherlands and Norway, data on firm level are rather scarce. Available figures demonstrate that in both sectors in these countries, policies and measures seem on the whole to have reached many employees in recent decades. But there are also signs that participation has not been equal among different categories of employees. In particular, lower qualified workers seem to have participated to a lesser degree in training. The same holds true for workers in small and medium-sized enterprises.

7. An important recent development which is evident in Norway, Belgium and The Netherlands is sectoral agency policies to *strengthen the regional level*. Both in the printing industry and in the hospital sector the - nationally operating - sectoral training institutes are trying to build regional networks and develop training policies adapted to specific regional circumstances. Often they do this in collaboration with local authorities, local training agencies, local departments of branch organizations and trade unions and local networks of companies. A major objective of these regional policies is to bring training initiatives closer to their target groups. A second objective is to establish a more decentralized form of coordination of training activities and to get impetus from the actors in the field for central sectoral policy-making.

With this trend towards regionalisation, training policy processes become further devolved. Within the regions, new types of agencies and bodies may arise which - as the regional initiatives in the printing and hospital sectors demonstrate - often assemble a

variety of interest groups. Once established, the regional initiatives will develop their own dynamic. In the long run, this may lead to more regional diversity in the level of training activities, to more fragmentation in training policy-making and perhaps to more intransparancy of the training provisions. But the new regional-sectoral combinations also provide an opportunity to activate companies and workers in a better way than central agencies can do. Besides, they provide platforms for mutual consultation and coordination of the wishes and activities of different interest groups.

6. Positioning of the sectoral training systems

The research model which we have used in this study focuses particularly on the sectoral systems for continuing training. The sector studies have revealed that especially in Belgium, The Netherlands and Norway, both in the printing and the hospital sector these systems occupy an important place in the intermediate field between education and employment. As such, they provide a flexible connection, along which new developments in the employment system can more easily become incorporated in education.

In this chapter we will discuss this intermediate role of the systems for continuing training by positioning them in relation to initial education, the labour-market and the employment system. These interactions deserve more attention then thus far has been given to them in the applied research framework.

6.1 Interactions between continuing training and initial training

First, the *interactions between continuing training and initial training* deserve special attention (cf. Piehl & Sellin, 1994). In most countries and sectors, these segments have long developed along separate lines. Particularly in the printing industry, however, there is a growing tendency to establish interconnections. The concrete ways in which these interconnection are established differs from country to country (and from region to region) and depends on factors like the State and the organization of initial education, the sector-oriented nature of initial education, the involvement of the social partners in initial education, the flexibility of provisions and programmes for initial education, the tradition of cooperation between agencies in initial and continuing training and the attitudes regarding cooperation between the dominant actors in the systems. Legislation in the field of education and training is also an important factor. Legal systems which cover both initial and continuing education and training seem to contain more impulses for interconnections than systems which only regulate initial education.

Interactions can occur in several ways, as the national reports demonstrate. First, interactions may take place at the *institutional level*, for instance when providers of initial education and continuing training are organized within the same institute or when consultative bodies are established with representatives from both segments. Within the Graphical Training Institutes in Norway and The Netherlands apprenticeship organizations and providers of continuing training are organized under one umbrella. Besides, the institutes have established joint consultative bodies with the State colleges for initial graphical vocational education. However, as the national reports demonstrate, organization in one institute in not a guarantee of interactions. Within the Dutch graphical institute, apprenticeship training and continuing training are organized within separate departments and collaboration between these departments is not always taken for granted. Also, collaboration between the training institute and the graphical colleges is

only in its initial stages and has to crystallize further. In Norway and the United Kingdom equal difficulties are signalled regarding cooperation between the sectoral training institute and the regional colleges for initial graphical education. Mainly, these have to do with different orientations regarding the content and target groups of the training programmes.

Secondly, interactions can take place at the level of *training policy development*. Conditions for such interactions are better when joint institutional arrangements have been made or joint consultative bodies have been established. In Norway and The Netherlands the Graphical Training Institutes try to develop a common policy for at least the segments of dual initial education (apprenticeship training), further training for employees and retraining for employees at risk or unemployed graphical craftsmen. Common policies includes joint training needs analysis, joint training planning and joint development of training programmes and curricular. In both countries policy development in the field of education and training is closely related to policy development in the field of labour-market and employment opportunities.

A third type of interaction occurs at the level of *training programmes and provisions*. This tendency seems to be most pronounced in the Dutch case. Here, graphical schools enter the market for continuing training by offering specific courses to employees, modules of the programmes for initial education are also used by providers of continuing training, trainers and counsellors from the graphical colleges are deployed in continuing training courses and projects, etc. And also the other way round: training courses of the Graphical Training Institute, originally planned for further training, become incorporated in modules for initial training, trainers of the Institute are deployed as consultants or teachers in the graphical schools, information from training needs analyses is used as an input for the development of initial training programmes. Interactions have to crystallize further, but actually they are an important point for the branch organizations.

A fourth type of interaction has to do with *the finanial arrangements for training*. The graphical training funds in Norway, Belgium and The Netherlands both finance continuing training as well as initial apprenticeship training, particularly 'second chance' initial training for adults. In principle, both financial streams are divided, but in practice finances often are brought together for the development of specific programmes and projects which can be offered to both new entrants in the sector and employees already working in printing companies. Several ways of cofinancing can help to solve administrative problems which may occur in these initiatives.

Finally, a peculiar type of interaction has to do with new developments in the field of the *certification of training*. Traditionally, initial education and continuing training have different certification systems. Initial education is certified by governmental agencies, according to national standards, set in collaboration with the sector. Continuing training is often not certified and, in so far as certificates are granted, these often do not meet any national standards and are not recognized by the government. This does not mean that

they do not have any value - on the contrary, certificates recognized by a sector or branch may have a high added value for someone's position on the labour-market - but their 'civil effect' usually is limited to the sectoral level. The system of national vocational qualifications, which has recently been introduced in the United Kingdom and The Netherlands, may change this situation. In this system, national certification standards are defined, which apply both to initial as well as continuing training. A person who meets the standards, whether in state colleges, through private training courses or in a totally different way (self-study, tele-learning, assessment of practical qualities), can obtain a recognized certificate. In this system, in so far as it concerns certification, the borders between initial education and further training become blurred. It is expected that the new system will also have great institutional and educational implications in the countries and sectors involved.

In the *hospital sector*, the situation is more diffuse. Here, at the level of the nursing occupations, initial education and continuing training seem to be more seperated. Initial education belongs to the responsibility of the state colleges. Further training falls under the direction of the hospitals themselves. Moreover, with the exception of The Netherlands, the sectoral level is less articulated as a level for the organization of training. So, the training activities of the agencies in the different segments (public colleges, hospitals, training institutes) are less coordinated. At the level of doctors and specialists, on the other hand, initial education and continuing training are strongly integrated. Initial training is clearly a separate segment, but it is strongly connected with further training through the regulation of specialist training and certification by the medical professions and the organization of specialization programmes within the professional working communities in hospitals. However, as we said earlier, this medical specialist system is not so much a sectoral training system as a professional training system.

6.2 Interactions between training for employees and for the unemployed

A second point which calls for attention is the *interactions between continuous training for employees and training for the unemployed*. These segments have been clearly separated for a long time. In most countries, training for employees is considered to be a matter of private initiative, whereas training for the unemployed is usually considered to be a responsibility of the government, i.e. the public employment service. With the spread of sectoral training initiatives, new opportunities arose for the establishment of better connections between these two formerly separate segments (see Grhnewald & Moraal, 1997). Especially in Belgium and The Netherlands, the sectoral agencies play a major role in the adjustment of training policy to the sectoral labour-market and employment policy. This holds true for the both the printing industry and the hospital sector. In the Norwegian printing industry, the sectoral training institutes also take some initiatives for the unemployed, but here also regional authorities and the trade unions are separately active in this field. In the United Kingdom training initiatives for the unem-

ployed are merely a State responsibility; the sectoral training provisions are confined to deployed and unionized workers. In Latvia unemployment seems to have become a problem, but so far, it has not really been placed on the agenda of the training agencies.

The *Belgian sectoral training funds* were originally founded to provide extra training facilities for the unemployed. Based on national legal regulations, the funds were considered to operate as an instrument of an active labour-market policy to fight unemployment. The original target groups of the funds were the unemployed or employees threatened with unemployment. This general target group could be more closely defined by the sectoral funds themselves, according to the specific situation in their sector. From the beginning, the sectoral funds in the printing sector did not respect this strict definition and extended their target group to all employees working in the sector, with special emphasis on those working in companies and areas in crisis. So, the fund expanded the definition of so-called 'risk groups' to all workers in the printing sector. As a consequence, the training fund has concentrated its efforts on companies and workers. However, initiatives for the unemployed have also been taken, mostly under the authority of the public employment service. Both special training courses as well as special projects have been organized for the unemployed. Most of these activities were cofinanced by the employment service. A major problem for the funds at the moment is the fact that the employment service is less and less able to subsidize training activities because of reductions in its own budget.

In contrast the training funds in the Belgian hospital sector have applied a strict target-group definition from the beginning and have directed their efforts mainly towards the unemployed. Their main objective still is 'to finance labour-market and training initiatives for risk groups'. As 'risk groups' in the health sector they have identified the long-term unemployed (i.e. more than a year), low-qualified unemployed persons, unemployed persons who are handicapped, unemployed persons who participate in part-time education, unemployed persons who want to re-enter the labour process, low-qualified employees (i.e. no recognized certificate) and employees hit by a collective dismissal or restructuring plan. So, the emphasis is on activities for the unemployed, but employees may also participate in activities financed by the fund. During the last years, several programmes have been financed to stimulate the entry of new nurses into the sector. Programmes were carried out in close collaboration with the employment exchange agencies and the nursing schools. The fund provided the finances for the development of programmes, the reimbursement of training costs for participants, training leave arrangements, etc. The nursery schools provided teachers and curricula and support in practice training. The employment agencies provided support in the sphere of the exchange of job vacancies, job counselling and guidance by job seeking. Recently, a special (short) training programme has been developed for low-qualified job-seekers, aiming to qualify them for the job of logistic help in health care. With this initiative the social partners want to create more jobs for the lower-qualified unemployed, while at the same time lightening the work load of qualified nurses in hospitals.

In the *Dutch sectoral funds*, target groups are not limited to the unemployed, but cover mainly three groups: young people, i.e. new entrants onto the labour-market; employees, in particular employees who have to be trained or retrained owing to changes in technology, organizational structures, job profiles, qualification requirements, etc.; and the unemployed, i.e. employees from the sector who have lost their job or are made redundant and job-seekers who are interested in finding a job in the sector. In fact, both in the printing industry and in the hospital sector, the training funds are embedded in an institutional structure which covers the whole sectoral labour-market, both on the supply side and on the demand side. The joint sectoral bureaus cover not only education and training policies but also policies in the field of technology, employment, labour provision, recruitment, job mobility and job creation. The training funds focus, of course, on training, but within this wider institutional framework subsidy schemes for training can easily be linked with subsidy schemes in the field of job creation, job mobility, work experience placements, etc.

The training fund of the Dutch printing industry offers, for instance, two types of project at the moment for the unemployed:

- ' Entry projects', i.e. projects aimed at retraining unemployed people from special target groups - risk groups - in the labour market, in particular migrant workers and the long-term unemployed. These are longer courses of approximately one year, during which the trainees get four days of practice training and one day of theory in graphical colleges or in a training centre of the employment service. After the course they receive a certificate, recognized by the sector, which entitles them to enter apprenticeship programmes. After the course, a job is also guaranteed, usually in the first instance a temporary job.

- 'Re-entry projects', i.e. projects aimed at training unemployed graphical craftsmen in order to qualify them for a new job, inside or outside the printing sector. These are usually shorter courses. An important target group is conventional pre-press workers who have lost their jobs because of technological developments. In the projects they can obtain new qualifications, e.g. in electronic pre-press, logistics, multimedia or after-press activities. Most training is also carried out in the practice training centres of the graphical colleges and of the employment service. Sometimes, however, especially in the case of training for jobs outside the printing branch, training is contracted out to other providers. Training then is often connected with job counselling.

The training fund for the Dutch hospital sector operates mainly with subsidy schemes to stimulate the entry of the unemployed onto the labour-market and within hospitals. At the moment, it has two special instruments at its disposal: a subsidy scheme to encourage hospitals to take on job-seekers from risk groups on the labour market, like the long-term unemployed, migrant workers and older women re-entering the labour-process. An institute which takes on someone from one of these groups can receive a reduction in wages and social insurance costs and can claim extra money for practice training to facilitate job entry. A second instrument for these target groups is the job-creation

programmes of the government and the social partners, which the sectoral agencies coordinate. These try to stimulate the creation of new jobs at the bottom end of the job structure. These jobs have a supplementary character. Salary costs are fully paid from the subsidy scheme. As far as additional training is needed, it usually can be paid for with a subsidy from the training fund.

So, both in Belgium and The Netherlands, the sectoral agencies have extensive special programmes for the unemployed and employees threatened with dismissal. With these new target groups, new agencies have also entered the sectoral training system, i.e. the Employment Exchange and its regional offices. As we have seen in a number of regions in both Belgium and The Netherlands, the arrangements with these agencies have been formalized in a sectoral covenant on employment, recruitment and training..

6.3 Interactions between training and innovation

A third important point we want to stress are the *interactions between training and innovation*. These are particularly clear in the printing industry, in Belgium, The Netherlands, Norway and the United Kingdom. The training agencies in these countries have explicitly adopted a role in the transfer of innovations by studying the implications of new technologies, translating these implications into educational requirements and, thus, trying to incorporate the new technologies gradually into the curricular of further and basic education. In the long run, they argue, this may stimulate the adoption of new technologies at the company level and their further dissemination in the sector.

Coping with technological change has always been a major policy objective of the social partners, and their joint bodies in the printing industry. Over recent decades, the strategy of, for example, the Norwegian printers and their trade union has been based on two principles: first, acquiring an agreement-based jurisdiction over the introduction of new technologies and, second, acquiring the necessary skills to be able to operate it. The trade union has concluded several specific agreements with the employers regarding the social aspects of the implementation of new technologies, and they have put in practice an active policy of retraining and continuing training for their members, besides making training issues part of the bargaining process with the employers. In The Netherlands employers' and employees' organizations also have a long tradition of joint regulation of technological innovation. Arrangements concerning new technologies are part of the Collective Labour Agreement for the printing industry. The joint Central Bureau of the printing sector has a special staff for the monitoring of technological developments and the elaboration of plans and projects to cope with their social consequences. In both the Dutch and the Norwegian printing industry, education, training and retraining have played a major role in the adoption of new technology. According to experts from both countries, this is an important reason why in the printing industry the adaption of the workforce to the requirements of the new technologies was rather quiet compared with the adaption processes in other sectors.

However, in a situation of rapid innovation, sectoral training systems can easily come under pressure. In particular, they may experience tensions when innovations are introduced which cross the demarcation lines of their traditional domains. This is the case at the moment in the printing industry where a wide range of new multimedia products is flooding the market and companies are making huge investments in order to keep up with this new technology.The new multimedia products technologies which cross demarcation lines particularly between the pre-press work in the printing sector and media processing in other sectors, like for instance publishing communications, audiovisual products and advertising and design. It is interesting to see how the sectoral training agencies respond to these developments.

In the *Belgian printing industry*, the joint training fund follows a double strategy. In the first place, it puts heavy emphasis on the hardware side of innovation. Its main policy at the moment is to invest large sums in new printing equipment for schools and other training centres where new printers are educated. For the moment, the social partners have decided to give these investments a higher priority than training subventions for companies. In the second place, it stimulates the incorporation of technology-related new courses in the training programmes for apprenticeship training, for independent entrepreneurship or further specialization in the sector. The course supply now contains among other things programmes for the design of publicity, graphic electronical design and digital graphic processor.

In the *Norwegian printing industry* a joint innovation institute, the Graphical Institute, was established in 1987. It is explicitly technology-based and works for the whole sector. At the moment, it is the leading Norwegian centre for publishing and applied information technology. The Graphical Training Fund participates in the financing of this institute, as well as the social partners, State authorities and several research and development organizations. The objective of the Institute is to transmit competences and skills through collaborative projects with enterprises, consultancy work, training programme development and the provision of courses. It provides training for union members as well as other client groups. It offers short courses on new technologies, like multimedia, electronic publishing, colour management, text and picture software and lay-out and design. It also conducts research and development projects, for instance into multimedia publications, multimedia design, information logistics and virtual enterprises. In addition, it operates a multimedia laboratory equipped with the latest computer and network technologies (e.g. Internet).

Besides this high-tech Institute, there are the Regional Competence Centres of the Norwegian graphical trade union. Together with the labour-market authorities they direct their efforts towards the unemployed. The Centres have also incorporated new technologies in the courses they offer, e.g. desk-top publishing, multimedia applications and Internet courses. Usually, these courses are given at a lower qualification level than the courses of the Graphical Institute. Admission to the courses is restricted to union members.

In the *Dutch printing sector,* the Graphical Training Institute is the main provider of continuing training. Like the Norwegian institute, in recent years this institute also has developed itself into a combination of a training centre and an innovation centre. The centre has a special division for training (besides the apprenticeship division) - the 'Course Company' - and training for new technologies is one of the spear points of this Course Company. In the past ten years many courses in new electronic prepress techniques have already been introduced, like desk-top publishing and image processing. But technology changes very rapidly and at the moment a complete new supply of course offerings is being developed, mainly in the field of multi media. This is an all round supply of short, practical training courses (up to five days), which can be followed individually but can also be combined in a modular trajectory into a number of 'learning routes'. There are three such routes following an introductory course: design of new media, technical realization of new media and project management of new media. Routes are assembled with courses in text and image processing, video and sound, scripts and story boards, animation and modelling, designing and authoring.

Besides adapting its course supply, the Training Centre also follows a strategy of intersectoral collaboration. It is argued that, precisely because new information and communication technology crosses sectoral borders, it is necessary to look over traditional sectoral boundaries and to cooperate with institutes in adjacent branches. Recently, the Centre has established contacts with training institutes in the multimedia branch, the branch of audiovisual producers and the advertising branch. The aim of these contacts is to lay the foundation for the collaborative development of new training programmes.

So, in each of these three countries the training institutes use their provisions of continuing training to respond to new developments in technology. However, they are well aware that in the long run, not only further training but also initial training will be affected by the demands of new technology. In this regard, they see a clear interaction between the adaption of the supply of continuing training and the adaption of initial education. The Dutch Training Centre, for example, stresses the role of its 'innovative supply' (see above) with regard to initial training. It envisages a connection between the spread of innovations in the sector and their incorporation in the training programmes. In the first instance, one argues, technological innovations are incorporated in special courses for further training. After a while, when innovations become more dispersed within companies, these training courses can be expanded into broader modules which can be incorporated in the initial training programmes. In this way, with the spread of new technologies, the qualifications required to adopt and use them gradually become more widely developed.

6.4 Sectoral training systems and economic restructuring

A sectoral training system supposes a certain level of homogeneity in a sector. As the printing industry clearly demonstrates, the system comes under *pressure where there is an increasing diversity of products and processes.* Within the sector, interests might then

come to diverge, which can cause tensions between subsegments (e.g. small offset firms versus big printing companies). Also boundaries between sectors can fade away, which causes tensions with adjacent branches (publishing companies, communications industry). In both the Norvegian and English as well as in the Belgian and Dutch printing industry, the sectoral training agencies are currently looking at on the question of how to respond to these processes of intra-seectoral and intersectoral restructuring. A crucial factor in this response is the 'identity' policies of the social partners. These are most explicit in Norway and The Netherlands.

In *Norway*, the employers' association has explicitly recognized the 'identity problem' of the branch, which stems from the blurring of borders between the graphical sector and related branches. It has recently introduced a new definition of the branch which emphasizes the relationship to market demands rather than to common product technology. Instead of 'entreprises related to printing' it now covers 'publishing entreprises, advertising and communication agencies, designers, distributers of graphic material, packaging entreprises and other entreprises which, process and transmit information'. With this emphasis on information processing, the sectoral domain is widened and gradually this broadened view will also come to affect the training systems. In fact, it has done already. One of the plans of the employers' federation is to start a new foundation course in 'media and communication'. Recently, a new body, the Council for the Media Industry, of which the printing employers' associations and the trade unions are members, has launched proposals to develop such a course for apprenticeship training. In addition, the introduction of courses in electronic printing and multi media is being encouraged for continuing training programmes.

New products and technologies have also strongly influenced the external organization of the printing sector in T*he Netherlands* and led to an erosion of the traditional domain of the printing industry, in particular in the pre-press stages of production. The rise of new information and communication technologies has led to a range of new graphical products produced outside the traditional printing branch. This has led to an explicit reorientation of the employers' association on the status of the sector. This point gives rise to great scepticism. The question even arises whether the printing industry will continue to exist in the coming years. Probably, as the employers argue, it will no longer be one recognizable sector, but a composite of different sectors. The printing industry as such will probably become part of a larger media and communications sector. The training institutes in the printing sector also envisage such a development and have already anticipated it by establishing contacts with branch organizations and training institutes of adjacent branches, like the advertising branch and the audiovisual products sector.. Probably, in the longer run, the training agencies will follow the economical restructuring of their domain and will become embedded in a broader information and communication industry. At the moment, however, such an industry is just in its infancy.

A special case of economic restructuring is taking place in *Latvia* at the moment. Here, after the fall of the communist regime with its centralized system of training planning and budgeting, the printing industry's training system has clearly got under way. There is a

trend towards sectoralization, although the system is very diffuse and sectoral agencies are still in the making. The tendency is to move away from the centralized planning system towards a more decentralized form of training-policy development, with close collaborative relations between educational colleges, companies and newly established sectoral agencies.

In the United Kingdom developments have been the other way round. Here, there is also a trend towards sectoralization in the printing industry. New joint bodies have been installed, joint agreements have been made, joint training policies have been developed by the social partners. But in Brittain the starting point was not a central planning system, but, on the contrary, the private sector. Joint sectoral training institution were abolished in the seventies and replaced by voluntary associations and market forces. The Brittish printing industry, however, went through a severe crisis. Both the social partners and the government consider new sectoral training initiatives as one of the instruments which can help to correct market failures.

So, we see that sectoral training systems meet serious limitations when they are confronted with rapid technological change or economic restructuring. However, if their main agencies take a flexible point of view regarding 'identity' questions, they may be able to cope with these changes and restructure themselves in a way which is more suited to the underlying economic realities. As the cases of Latvia and the United Kingdom demonstrate, sectoral training systems with enough built-in flexibility can make a difference, either as a mechanism to overcome the disadvantages of central planning systems or as a corrective mechanism for failures on the training market.

6.5 Sectoral training systems and political intervention

A final point we wish to mention is the relationship between sectoral training systems and the State, represented by government departments in the field of education and social and economic affairs. From the sectoral studies it has become clear that the articulation of sectoral training systems depends partly on the role of the State and the policies of the State agencies responsible for education and training. As might be expected, as far as initial education and training is concerned, the State plays an important role in the five countries, although there are differences in the amount of State influence and the way the State exerts its influence on the sectoral level. In Latvia, for instance, initial vocational training is fully financed, planned and programmed by the State, whereas in the United Kingdom the state finances initial training but otherwise plays a more distant role and limits itself to establishing the standards for certification. The planning and programming is left to autonomous educational institutes. In Norway and The Netherlands, the planning and programming of initial vocational training is largely decentralized to the educational institutes, with the government in a financial and certifying role. Here, however, the social partners have also become more and more involved in the planning and programming of initial vocational training.

As far as continuing training is concerned, we may presume that there are differences between the private sector, of which the printing industry is an example, and the public sector, which in this study is exemplified by the hospital sector. In the public sector, the State plays a role *qualitate qua*, because it has the primary financial and administrative responsibility for the institutions. In the private sector, the State has a broader range of options. Here, State intervention can range from detailed legal regulations to supportive measures, which can be used voluntarily by responsible agencies to correct market failures. The policy options chosen by the State, particularly the options which become expressed in legal regulations, can exert strong influences on the development of sectoral training systems.

In *Norway*, for instance, continuing training in the private sector has so far been regulated primarily by agreements between the social partners, at the national and sectoral level, and by individual company decisions. Currently, however, a special government committee is working on a national framework for continuing training, including possible proposals for legislation concerning universal rights to continuing training. So, there is a trend towards increasing state intervention. If the proposals are implemented, they will probably lead to a greater sectoralization of continuing training.

In T*he Netherlands*, continuing training also has so far been primarily a matter of collective agreements, sectoral covenants and individual company decisions. The State keeps its distance and considers continuing training for employees to be the responsibility of employers, employees and their representative organizations. The government may give (financial) support for training to sectors and companies, but usually this takes place within the framework of special subsidy schemes and projects. However, there are two developments which may strengthen the role of the State in the field of continuing training. Firstly, a new law on vocational and adult education and training was recently passed, which establishes a system of national vocational qualifications. These standards can be applied both in initial and in continuing training. Secondly, a new law on 'career breaks' was recently tabled in parliament. The objective of this law is to give employees a legal right to leave their job for a certain period of time, without losing it. This period of paid leave can then be used for a sabbatical period, to take care of children or older parents or for education and training. The time off will be on part pay. Employees will probably be able to accumulate annual rights for a longer period. It is expected that this law will provide extra stimuli to arrangements between the social partners in the field of continuing training.

In *Belgium*, State regulation of continuing training is stronger then in The Netherlands. A law on paid educational leave was introduced as early as the eighties. In addition, at the end of the eighties the law on the financing of continuing training was passed, which has led to the establishment of sectoral training funds. Many of these training funds use the paid educational leave arrangements as one of the instruments to stimulate the training of employees. As we have seen, in Belgium, many sectoral training funds have established relationships with the employment exchange agencies for the development of plans and projects for training the unemployed and other special risk groups on the labour-market. Often, the State supports these initiatives with special subsidy schemes.

In the *United Kingdom*, State intervention in continuing training has developed strongly since the seventies. At that time, the State intervened in the sense that it abolished the system of statutory training levies and replaced it by a voluntary system, where continuing training was considered to be the responsibility of employers and employees and was left to the market. In the nineties however, with the establishment of the national vocational education standards, the legal possibilities for State intervention have increased. The State now can play a role in the certification of continuing training. In practice, however, the state's role is rather limited, as we see for instance in the Brittish printing industry, where only a small number of companies actually apply the NVQ standards. In the UK, as in The Netherlands, the State still remains rather aloof and tries primarily to influence training efforts in sectors and companies through subsidy schemes and special promotion projects.

So, although in some countries the growing influence of the State in continuing training in the private sector is evident, in the public sector the State appears to be withdrawing and limiting its role. This trend is most clear in the two countries with a State health-care system: Latvia and Norway. In Latvia, decision-making in the field of training is still strongly centralized, but it is envisaged .that the occupational associations of nurses and doctors will become more strongly involved in the decisions in this field within hospitals. However, their influence still remains limited compared with the influence of the State medical schools. In Norway recent policy initiatives may be seen as a move in the direction of sectoralization. Regional political bodies are to be established which will be responsible for hospital manpower planning, training provisions and the allocation of medical specialists. These bodies must provide greater coherence in the training provisions in the hospital sector at the regional level. Another important element of recent State policy initiatives in the hospital sector is the effort to disentangle professional interests from public policy making. With the establishment of the new regional political bodies, the professional interest groups will be placed more in the role of adviser than in the role of decision- maker, a role which they now often have in practice.

In the mixed public-private hospital sectors in The Netherlands and Belgium, the picture is more varied. Here, there is a clear distinction between the circuit of (higher) education and training for doctors and medical specialists and the circuit of training for nurses and caretakers. Most doctors are self-employed professionals and their associations have a strong influence on the regulation of employment, education and training in the various medical disciplines. There has always been a certain tension between the hospitals and the professional groups. Nurses and caretakers are employed by the hospitals. For them, continuing training is usually provided by the in-service training departments of the hospitals and subjected to the arrangements made in the collective labour agreements of the social partners. Both in The Netherlands and in Belgium the trade unions and the professional associations of nurses and a number of other paramedical occupations have formed a coalition for collective bargaining.

7. Lessons to be learned regarding the research model

In the previous chapters we have described the sectoral training systems in the printing industry and the hospital sector and we have positioned them in relation to the initial education system, the labour-market and the employment system. These analyses demonstrate that sectoral training systems do not operate in a vacuum, but are always embedded in an environment which may exert influences on the sectoral dynamics itself. But as we have tried to show, environmental influences are not determinant; sectoral agencies do have a certain autonomy and may indeed, by their own activities, succeed in creating new opportunities by actively encountering and acting upon environmental conditions. We think that making these processes and relationships clear is one merit of the of the applied research model.

In this concluding chapter we focus on the research model itself and discuss some of its methodological aspects. In the model, the development of sectoral training systems is in four processes: the articulation of sectoral (training) agencies and bodies, the negotiation of training agreements, the creation of training policies and provisions and the implementation of training policies and programmes on firm level. On the whole, we think this model provided a workable device for the description and analysis of developments in the two sectors under study. However, some critical remarks must also be made.

1. First, there is the question of the *definition* of the sector. In research into sectoral training systems, for pragmatic reasons, a decision has to be made on how to define the system's borders, i.e. how to demarcate the field of study and how to determine which agencies, agreements, policies, etc. will be included and which will not. Such demarcations and determinations are easier in the case of well established systems than in the case of systems in a state of formation or restructuring. Particularly when major restructuring processes occur, like in the printing industry where traditional graphical activities are increasingly becoming interwoven with affiliated activities in fields like publishing, advertising, communication, image processing, etc., demarcation itself becomes part of a sector's articulation process. So, especially in these cases, definitions made beforehand should not be too rigid and should leave enough room to include cross-sectoral activities. We think the best way to deal with this question is to consider a 'sector' primarily as an 'organizational field', i.e. a network of agencies operating within a peculiar segment of the social division of labour.

2. A second point is the question of *linearity*. In the applied research model, the subprocesses of the system's development are staged in a sequential way. After the agencies have articulated themselves, they negotiate agreements on training, shape training policies based on those agreements and try to implement these policies within the associated companies. This is a rather linear conceptualization of the development process, which may be in contrast with the real world. Here, sometimes various processes seem to happen simultaneously. One can argue for instance that

negotiation is a form of articulation, i.e. agencies define and demarcate their respective positions through negotiation processes. Or, one may argue that negotiations and agreements are always about something, i.e. training policies, and that, while negotiating, agencies already create their main policy lines. We should be aware of this connection - perhaps even inclusion - between the different sub-processes in the formative stages of sectoral training systems. Analytically, however, we think they should be divided. At least, as this study reveals, a clear borderline can be drawn between the processes of the formation and the implementation of a sector's training policy.

3. A third experience in applying the model is that, in actual research, it is easier to reconstruct the more stable/durable elements of the sectoral training systems (agencies, agreements, policies, programmes) than the *processes* of which these elements are the result. Particularly when interviewing experts, it has proved to be difficult to analyse developments in process terms. On this point, we think, the methodology could be elaborated and refined. But we have to keep in mind that the model is primarily an analytical device, a scheme for the interpretation of real developments in a qualitative way. It is not a measurement instrument for quantitative research.

4. The fourth point has to do with the *time span* of the research. The model, with its ideal typical staging of the development process, leaves the time-scale open. In principle it can be applied over both an extended historical process and a limited period of time. Which time scale is applied will of course depend on the objectives of the specific research. However, when using the model, the question of the time-scale brings with it a number of specific problems. In sectors with a long tradition of training (like the printing industry) extensive research would be needed to cover all aspects of the model. In sectors with only a short tradition, developments may still be too uncrystallized to be clearly depicted using the model's concepts.

5. The last point we want to stress concerns the *reflexivity and self-reflexivity* of the sectoral training systems. In the original model, reflection and self-reflection are implied in the feed-back processes, but we think they have to be made more explicit, because they are at the hart of the reproduction of the sectoral systems as a separate organizational level for the coordination of training. As this study reveals, there are four basic reflective processes: the monitoring of developments relevant to training (training needs analysis!); the monitoring of training policies and activities; the monitoring of the results of training policies and activities; and monitoring of the interactions between the agencies within a sectoral training system. Policy research and policy information systems are important instruments for sectoral (self-)reflection, but other devices have also been developed in the two sectors we have studied. Sectoral training systems can differ strongly with regard to their potential for reflexivity and self-reflexivity. A hypothesis could be that the higher the level of reflexivity within a sectoral system, the greater its potential for learning within traditional sectoral borders. However, the higher its learning potential within traditional borders, the stronger its tendency to resist innovations which cross demarcation lines.

6. This brings us to the central role of the *agencies and bodies* in sectoral training systems. As we have seen in the sector studies, many types of agencies can be active in the field of training: employers and employers' organizations, employees and trade unions, training institutes, governmental agencies, local authorities, employment exchange services, joint sectoral training boards, joint training funds of the social partners, regional collaborative platforms of training institutes and sectoral representatives, etc. If these agencies in one way or another come to coordinate their training initiatives, a basic element for sectoral training- policy development has been established. In research into sectoral training systems a clear picture must be obtained of the agencies involved in sectoral training-policy development and in the interrelationships between them.

7. We may also say that the interrelationships between the agencies and bodies involved constitute a sector's *training-policy network*. This training- policy network is at the heart of sectoral training systems. During the past decade, network approaches have become popular in the social sciences, as bridges between macro and micro-studies of policy issues, and they have also been applied recently in the field of education and training (see Van der Krogt, 1995; Van Wieringen, 1996; Hanft, 1997). In our view, these are very promising approaches. The notion of a 'network' makes the notion of a 'system' dynamic in the sense that it gives the actors who constitute the system a central place and considers actors as not only operating within the given set of conditions but also as acting upon the circumstances they encounter. With the decisions they take, actors can continuously reproduce the system they constitute, but they also can adapt or innovate it. This general logic also holds true for social systems in the field of training (see Van der Krogt and Warmerdam, 1997). As the studies of the printing industry in particular demonstrate, sectoral training systems can be relatively stable and durable for a prolonged period of time, but they can also be altered if the central agencies or bodies within the system consider that the existing structures are no longer valid and start to search for options to change them. The conceptual model we have applied recognizes the inherent dynamics of sectoral training systems, but it was not easy to grasp them in an explicit way. Here also, reflexivity is an essential point. The opinions, arguments and analyses of the agencies involved regarding their own policies and activities are an important point of reference when one studies the development of sectoral training systems.

8. A focus on training-policy networks and on the dynamics of network development can also allow the analysis to move towards other levels of the organization of continuing training, in particular the level of *cross-sectoral and sub-sectoral networks*. As we have seen, in some of the countries involved, in the printing industry sectoral training agencies are actually breaking sectoral borders through collaborative initiatives with agencies from affiliated sectors. In the hospital sector, several initiatives on the sub-sectoral level have been identified, in particular initiatives to decentralize (sectoral) training policy development from the national towards the regional level. We think an analysis of such initiatives on the cross and subsectoral level is necessary to complete the picture continuing training. It will be particularly valuable in situations where sectors are subject to radical innovation and restructuration.

Some final remarks should be made concerning the value of the model for training research. The applied model of sectoral training systems is primarily an institutional model, which takes the evolution of agencies and institutions as the prime way of approaching the development of activities within a sectoral domain. The main question which this type of analysis answers is: 'To what extent do training agencies, agreements, policies and provisions in a given sector constitute a coherent system?'. As this study has revealed, the emergence of coherent sectoral training systems captures an important trend in some countries and some sectors and analysis of such sectoral training systems may be a fruitful starting point for further study of the mechanisms which link the sectoral training system to training systems at company level. This may enable further investigation into questions like: What is the impact of sectoral training systems on training activities in individual companies? Which mechanisms are needed to improve the impact of sectoral training systems on training systems at company level? Are coherent sectoral training systems essential prerequisites for raising the level of training activities in companies belonging to the sector? A comparison of training activities at company level between sectors and countries with different degrees of system coherence may provide answers to these questions. As far as the two sectors in this study are concerned, we may say that sectoral coherence makes a difference. But it is clear that this study of only two sectors is far too limited to draw more definitive conclusions on this point.

It is also clear that the research model leaves several research questions out of the picture. With its focus on sectoral training policies and on the impact of sectoral training policies on company level, questions concerning the articulation of sectoral versus national training policies are not given top priority. Although they are dealt with, as the sectoral studies in this project demonstrate, they are not the point of departure. However, the question of whether economic sectors should be autonomous in designing their own training systems and, if so, in what respect they should be autonomous, is an important question in itself. In studies of sectoral training systems the relationships between the political, or in this case the legislative system and the sectoral systems should be elaborated explicitly. State authorities intervene in several ways in sectoral training policies and seeing the political system merely as part of the environment does not seem to do justice to the interpenetration of the two systems. By describing the specific role of State agencies within sectoral training systems and by positioning sectoral training systems within the context of broader educational, labour-market and employment policies, as we did in the previous chapter, this limitation of a mere sectoral approach to training may be overcome.

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The sectors have been chosen to be complementary, profit and non-profit, facing both technological developments and sectoral and occupational restructuration.

The report demonstrates the sectoral training systems in relation to the education and employment systems and the larger societal context of each country.

It concludes with remarks on the usefulness of the sectoral analysis of training systems, on the basis of the model adopted for this purpose.

John Warmerdam

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